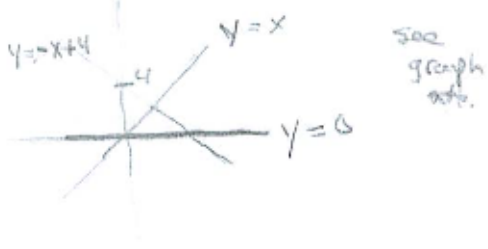
Original student work on Algebra 2 test question from the timed portion of the test.

5. Write three linear equations whose graphs form a triangle with an area of 6 square units.

$y = x$

$y = -x + 4$

$y = 0$



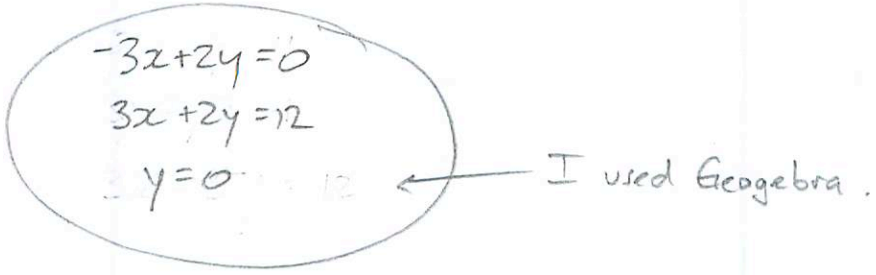
See graph

Supercorrection Form Name:_____

#____Convince me that you now understand the concept. Make connections and build on the problem if possible; be sure to explain the error(s) that you made.
Original score 3 out of 4 Supercorrection score 1 out of 4 (student to fill in these two scores with their best estimate from the rubric)

Rubric score of 1: Correct answer with working.

Correct solution:



#____Convince me that you now understand the concept. Make connections and build on the problem if possible; be sure to explain the error(s) that you made.
Original score 3 out of 4 Supercorrection score 2 out of 4 (student to fill in these two scores with their best estimate from the rubric)

My triangle had area of 4.

Rubric score of 2: Correct answer with working and some explanation.

Correct solution:

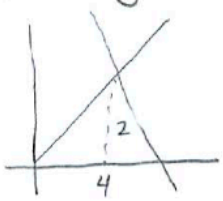
$-3x+2y=0$
$3x+2y=12$
$y=0$

I used Geogebra

Supercorrection Form Name:_____

#_____Convince me that you now understand the concept. Make connections and build on the problem if possible; be sure to explain the error(s) that you made.
Original score 3 out of 4 Supercorrection score 3 out of 4 (student to fill in these two scores with their best estimate from the rubric)

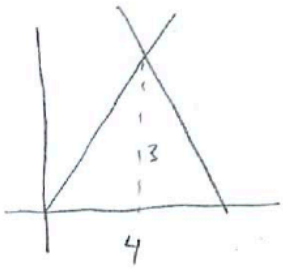
My triangle had area of 4



$Area = \frac{1}{2}(2)(4) = 4$

Rubric score of 3: Correct answer with working and good explanation.

Correct solution:



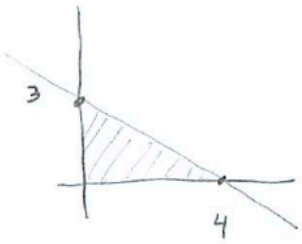
$Area = \frac{1}{2}(3)(4) = 6$

$-3x+2y=0$
$3x+2y=12$
$y=0$

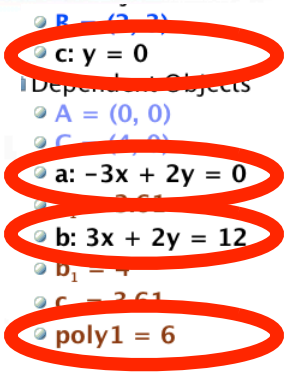
#_____Convince me that you now understand the concept. Make connections and build on the problem if possible; be sure to explain the error(s) that you made.
Original score 3 out of 4 Supercorrection score 4 out of 4 (student to fill in these two scores with their best estimate from the rubric)

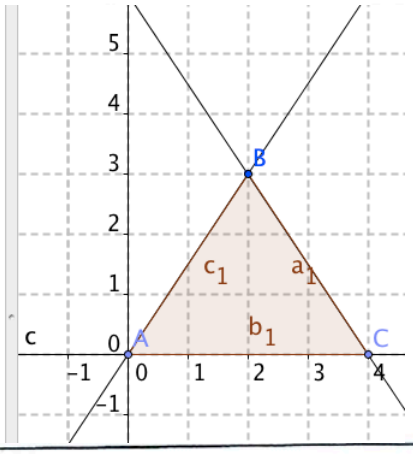
When I did this problem I used Geogebra to draw the lines but I accidentally made the area 4 instead of 6. I fixed it below. I now realize that I didn't need Geogebra. I could use the x-axis, the y-axis, and a line through (0,3) and (4,0). That line has a slope of $-\frac{3}{4}$ and a y-intercept of 3.

Correct solution:



$x=0$
$y=0$
$y=\frac{-3}{4}x+3$





Rubric score of 4: Correct answer with working and explanation that convinces me you completely understand the question and your mistake. [Note: if the answer to this beautiful working ended up wrong (perhaps an accidental positive slope) it would score a 0 on the rubric!!! So, be sure to check your answer with someone else...]